LANDAU ASSOCIATES, INC.
Geoenvironmental Engineering and Technologies

February 7, 1991

Mr. Mike Kuntz
Washington State Department of Ecology
M/S PV-11
Olympia, WA 98504-8711

RE: JANUARY 1991 PROGRESS REPORT
COLBERT LANDFILL RD/RA

Dear Mr. Kuntz:

Presented herein is the January 1991 Progress Report for the Colbert Landfill RD/RA Superfund Project (Project), which was prepared by Landau Associates, Inc., Spokane County's engineering consultant. It addresses the reporting requirements specified in Section XI of the Project Consent Decree, including:

- A description of remedial action activities commenced or completed during the reporting period
- Remedial action activities projected for the next reporting period (through February 1991)
- Any problems that were encountered or are anticipated.

1.0 ACTIVITIES COMMENCED/COMPLETED DURING REPORTING PERIOD

Several activities were commenced and/or completed during the reporting period. Most of these activities are related to rehabilitation of Pilot Extraction Well CP-E1 and continuation of the Phase I pilot studies. Specific activities performed during the reporting period include:

- Pilot Extraction Well CP-E1 was evaluated for the well performance problems discussed in the December 1990 progress report. Evaluation included removal and inspection of the submersible pump and discharge line, sounding the well, and inspection of the well casing and screen via downhole camera. The following conditions were observed:
  - Significant corrosion of the galvanized coating on the discharge pipe was observed and which could be indicative of galvanic reaction.
  - No sediment was present at the base of the well screen, indicating reduced well performance was not the result of sediment accumulation in the well.

- The downhole camera revealed the presence of large "flocks" of brown material, possibly iron bacteria, within the water column and coating the well screen.

- Pilot Extraction Well CP-E1 was rehabilitated based on the results of the evaluation described above. Rehabilitation included:

  - Removal and replacement of the well screen. The well screen was in excellent condition, indicating biological fouling was removed during screen removal or the reduction in well performance resulted from encrustation or biological fouling of the formation outside the well screen. The well was redrilled to 260 feet below ground surface (BGS), 10 feet deeper than the original well. The well sump was reduced from 5 to 2 feet. Thus, the well screened length was increased from 10 feet to 23 feet, and the top of screen elevation is unchanged (235 feet BGS).

  - Replacement of the galvanized discharge pipe with an epoxy and plastic coated discharge line.

  - Treatment of the well for biological fouling using chlorine. Sufficient sodium hypochlorite (laundry bleach) was placed in the well to achieve a 500 part per million concentration. The well was purged of chlorine after a 24-hour residence period.

- The East System/North Well pilot study was resumed on January 21. Pumping was terminated February 4 following successful completion of the pumping portion of the aquifer test (collection of water level recovery data is ongoing). Well CP-E1 did not exhibit abnormal drawdown or loss of efficiency. The adequacy of CP-E1 rehabilitation will be further assessed during future operation of the well for other pilot study activities.

2.0 ACTIVITIES PROJECTED TO BE COMMENCED/COMPLETED DURING NEXT REPORTING PERIOD

As specified in the Schedule for Submittal of Deliverables, the next reporting period extends through February 1991. Anticipated activities for February include continuation of pilot study activities, and audit of the onsite meteorological station. Specific activities anticipated for the next reporting period include:

- Initiate the East System/East Well pilot study. The pilot study will commence sometime during the week ending February 16. The start date is contingent upon observation wells for the East System/North Well pilot study attaining 90 percent recovery.

- Perform an external audit of the onsite meteorological station. Timely response by EPA on the Meteorological Measurements QA Plan (Plan) is requested so pertinent Plan comments can be considered prior to the audit (Ecology comments were received February 5). The audit will be accomplished, weather permitting, by late February.

3.0 ENCOUNTERED/ANTICIPATED PROBLEMS

Treatment system influent, effluent, and stack samples collected December 18, 1990, were not analyzed for volatile organic compounds. The analysis error was the result of sample tracking problems experienced by the analytical laboratory (Laucks Testing Laboratories, Seattle). The cause(s) and appropriate corrective action(s) are being evaluated, and temporary measures were implemented to prevent a reoccurrence of this problem.

The treatment system was sampled on January 30, 1991 at the same operational settings as those used for the unanalyzed samples. Thus, the loss of the original (December 18) data will not adversely impact the treatability study.

Split samples were collected on December 18 by Ecology and Environment. These samples now represent the only chemical data for that sampling event, rather than split (comparative) samples.

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This progress report describes the primary remedial action activities commenced or completed during the reporting period, and anticipated to be commenced or completed during the next reporting period. There are secondary and peripheral activities associated with the primary activities that are not described herein. If clarification is required for any of the activities presented in this progress report, or if additional information is desired for secondary or peripheral activities, please contact me or Dean Fowler (Spokane County).

Very truly yours,

LANDAU ASSOCIATES, INC.

By:

Lawrence D. Beard, P.E.
Project Manager

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No. 124-01.60
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cc: Neil Thompson, EPA
Dean Fowler, Spokane County
Lyle Diedieker, Ecology and Environment